

March 27, 1950.

Dr. W. Schwartz,
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GERMANY

Dear Dr. Schwartz:

If I understood your letter of inquiry correctly, you would like me to clarify the basis for my suggestion that "induced lysogenicity" might be interpreted as a "Lamarckian" response. If you mean by "dieser Frage", the entire problem of Lamarckism in genetics of bacteria, I can only refer you to references nos. 5, 9, 52, 61, 62, 81, 83, of my review article, as well as pp. 15-16, in particular, of this article itself.

The "exception, induced lysogenicity" might perhaps have been stated more clearly. I have in mind not any specially recent literature, but only the classical examples of resistance to bacteriophage when this is accomplished by the bacterium's taking up the phage, and establishing a symbiotic relationship with it. In this case, we could regard the adaptation of the bacterium, i.e., that it becomes resistant, as an event which is directed by the noxious stimulus, i.e., the phage. In this sense, the change is Lamarckian. Many other cases of resistance to bacteriophage are, of course, not the result of any direct effect of the phage on the bacteria, but instead are the result of rare spontaneous mutations, and the action of the phage is merely that of natural selection. For examples of induced lysogenicity, see especially references 15 and 99 of the review article, and also a more recent paper by Rountree, Jour. General Microbiology, 3:153-163, (1949).

Please let me know if I have not satisfactorily answered your question.

Sincerely,

Joshua Lederberg
Assistant Professor of Genetics